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October 9, 2007

FILED/ACCEPTED
OCT - 9 2007
Federal Communications Commission
Office of the Secretary

By Hand

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: WC Docket No. 06-125

Dear Ms. Dortch:

Enclosed for filing in the above-referenced proceeding is the Redacted version of a letter filed on behalf of Alpheus Communications, L.P. regarding the RBOC Forbearance Petitions currently pending before the Commission. This filing is also being submitted in the Commission's Electronic Comment Filing System (ECFS).

Also enclosed is an extra copy of this redacted filing, please date stamp and return it to the courier. Should you have any questions about this filing, please contact me.

Very truly yours,

Joshua M. Bobeck

Counsel for Alpheus Communications, L.P.

Enc.

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October 9, 2007

VIA ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: WC Docket No. 06-125

Dear Ms. Dortch:

Alpheus Communications, L.P. ("Alpheus"), through its undersigned counsel files this letter to respond to the RBOCs' continued assertions that forbearance is warranted for Ethernet and OCn-based services because competitors can compete in the burgeoning Ethernet market with TDM-based DS1 and DS3 special access services and that the FCC's impairment findings for OCn loops in the *Triennial Review Order* mean that competitors can simply build the facilities they need rather than purchase OCn special access services. As explained in more detail below, both of these propositions are simply wrong because:

- CLECs incur considerable extra costs to provide Ethernet using TDM special access circuits because the combined TDM and Ethernet equipment they must use is substantially more expensive than native Ethernet equipment;
- CLECs must pay for multiple TDM special access DS1s to provide for even 5 Mbps or 10 Mbps Ethernet services, quickly pricing themselves out of the market;
- CLECs must pay for equipment twice — their own Ethernet and TDM gear and the TDM equipment included with the RBOC special access service;
- The pricing for Ethernet services is not linear when compared to TDM pricing — e.g. the revenue available for a 10 Mbps Ethernet services is much less than 10 times the TDM price per megabit;
- For OCn services, the *TRO* anticipated circumstances where even though a competitor may be deemed to be unimpaired, the incumbent LEC still retains market power;
- The *TRO*'s OCn impairment findings were predicated on the availability of dark fiber UNE loops for those circumstances when CLECs could not build their own OCn level loops.

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I. COMPETITORS CANNOT ECONOMICALLY PROVIDE ETHERNET SERVICES WITH TDM-BASED SPECIAL ACCESS LOOPS

The RBOCs continue to perpetuate the myth that competitors can provide Ethernet services in competition with the RBOCs by using DS1 and DS3 special access services as the foundation for their Ethernet services. As explained in the attached Declaration of Francisco Maella and Kent Major,[1] this is simply not accurate. In addition to buttressing Time Warner Telecom's argument that "reliance on TDM special access inputs gives rise to service or performance problems that hinder competition,"[2] Mr. Maella and Mr. Major explain the significant "extra costs" CLECs incur to provide Ethernet over TDM special access circuits.

The important development here of course is the growth in the "mid-band" Ethernet market. As data needs grow for small and midsize businesses or large businesses that need more bandwidth at satellite offices, these businesses are outgrowing the one or two DS1s of bandwidth they currently consume. Instead, they are increasingly requesting solutions between 5-20 Mbps, with an Ethernet handoff, but are not ready to use (or pay for) the next TDM increment of a 45 Mbps DS3.[3] Thus, carriers with TDM-only solutions face a stark disadvantage in the market. The perfect case study here is cell site backhaul. Wireless carriers are increasingly indicating that they need 5-10 Mbps of Ethernet capacity to replace the one or two DS1s they are using to connect their cell sites to their mobile switching centers. Thus, as described in detail below, the inability of TDM technology to meet this need cost effectively quickly becomes apparent.

As Mr. Maella and Mr. Major explain, from a technical perspective, carriers can theoretically use TDM special access services such as DS1s to provide Ethernet services.[4] Ethernet over TDM, however, is limited by the capacity of the underlying TDM transmission path.[5] In other words, using a DS1 limits a carrier to an Ethernet transmission path of approximately 1.5Mbps. Using two DS1 circuits for an Ethernet transmission limits a carrier to approximately 3 Mbps of Ethernet capacity and so on

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[1] Alpheus Joint Declaration of Francisco Maella and Kent Major, ("Maella/Major Decl.") attached to this *Ex Parte* letter.

[2] *See Petition of ACS Anchorage, Inc Pursuant to Section 10 of the Communications Act of 1934, as amended (47 U.S.C. § 160(c)) for Forbearance from Certain Dominant Carrier Regulation of its Interstate Access Services, and for Forbearance form Title II regulation of Its Broadband Services, in the Anchorage, Alaska Incumbent Local Exchange Carrier Study Area*, WC Dkt No. 06-109, Memorandum Opinion and Order, FCC 07-149, rel. Aug. 20, 2007, at ¶ 31 ("*ACS Anchorage Forbearance Order*").

[3] Maella/Major Decl. ¶ 15.

[4] *Id.* ¶ 16.

[5] *Id.*.

in a logical progression.[6] Likewise, using a DS3 limits the CLEC to an approximately 45 Mbps path. Because of the burgeoning demand for mid-band Ethernet for those customers that need more than a DS1 but do not need and can not justify the expense of a DS3, demand for Ethernet in the 5 Mbps to 20 Mbps range is growing and is expected to continue to surge.

To provide a 5 Mbps or 10 Mbps Ethernet service, however, a CLEC must "bond" together several DS1 circuits into a larger pipe.[7] Thus to provide a 5 Mbps Ethernet service a carrier would need to bond at least 4 DS1s.[8] For a 10 Mbps Ethernet service a CLEC would need to use 8 DS1s. In comparison, dry copper provides approximately 5 Mbps per twisted pair.[9] A CLEC using dry copper unes to provide Ethernet would need only 2 twisted pairs of copper for a 10Mbps circuit. Dry copper loops can be obtained, without associated electronics and do not require redundant TDM equipment. The RBOCs, however, do not make dry copper available under their special access tariffs.[10]

AT&T would also have the Commission believe that CLECs that are forced to use TDM special access circuits to provision Ethernet service do not face "extra costs" when offering such services. Mr. Maella's and Mr. Major's declaration provides ample evidence explaining those "extra costs" that AT&T blithely dismisses, and how those "extra costs" cancel out the benefits of Ethernet services. It is these "extra costs" that contribute to pricing Ethernet provided over TDM special access out of the Ethernet market as shown below.

First, while Alpheus must invest in Ethernet equipment regardless of the facility used, the equipment used for Ethernet over TDM special access is far more expensive than the equipment Alpheus uses to provide Ethernet using dark fiber or dry copper because provision of Ethernet over TDM requires purchase of extra equipment that otherwise would not be used.[11] As TWTC has also explained,[12] providing Ethernet using TDM special access services requires CLECs to pay double for the electronics — once for its Ethernet and TDM gear and once for the RBOC's TDM multiplexers

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[6] *Id.*

[7] *Id.* ¶ 17.

[8] *Id.* ¶ 16. (The bonding process usually sacrifices 10% of the bandwidth.)

[9] *Id.* ¶ 17.

[10] Though not an issue in this proceeding, the importance of dry copper loops, especially for Ethernet, is increasing daily.

[11] Maella/Major Decl ¶ 18.

[12] Letter from Thomas Jones, Counsel, Time Warner Telecom, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 06-74, Attach. Reply Decl. of Graham Taylor, ¶ 18, August 8, 2006 ("TWTC Taylor Reply Decl.").

that generate the DS1 (or DS3) TDM transmission path.[13] Or more plainly, Ethernet service requires Ethernet equipment; Ethernet over TDM requires the CLEC to invest in its own Ethernet and TDM and pay for use of the ILEC's TDM equipment.[14] This cost difference is substantial and must be factored into the price.[15]

Second, and just as dramatic, AT&T ignores the extra operating costs competitors incur in using TDM special access to generate sufficient bandwidth to provide the Ethernet services currently fueling the growth of the Ethernet market -- the "mid-band" Ethernet such as 5 Mbps and 10 Mbps level services. As Mr. Maella and Major explain, the costs of using TDM special access circuits to provide these services quickly outstrips the revenues available from providing those services to customers. Providing 5 Mbps and 10 Mbps Ethernet services over bonded DS1s would cost Alpheus approximately ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****.[16] That cost includes the ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** Alpheus pays for DS1 channel terminations under its pricing flexibility arrangement with AT&T under AT&T's FCC Tariff No. 73.[17] Thus, in order to bond the DS1s necessary to sell a 5 Mbps or 10 Mbps Ethernet service Alpheus must pay ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** for the loop without even factoring in the cost of Alpheus' Ethernet and TDM equipment.[18] Based on a conservative eighteen month return on investment, the equipment necessary to provide Ethernet over TDM special access is ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****.[19]

These costs are most certainly "extra costs" due to the fact the bottleneck facilities competitors need to provide Ethernet service are not readily available from sources other than the ILEC.[20] Where Alpheus can obtain copper loop facilities, it can compete more effectively. But in many instances copper is not available - for

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[13] Maella/Major Decl. ¶ 18.

[14] *Id.*

[15] *Id.*

[16] *Id.* ¶ 20.

[17] *Id.*

[18] *Id.*

[19] Ironically, Alpheus is in a better position than many competitive carriers, since it only needs to purchase last mile facilities. Alpheus has deployed extensive central office collocations and therefore uses its fiber network to get its Ethernet traffic to the closest central office. Then, it obtains the last mile connection from the ILEC. For carriers which are required to buy mileage, the costs noted above would be significantly higher. *See* Maella/Major Decl. ¶ 20.

[20] Maella/Major Decl. ¶¶ 10-11.

example AT&T will not provide Alpheus with legacy copper loops to serve wireless carrier cell sites, forcing Alpheus to pay the "extra costs" associated with bonding TDM special access circuits, paying for TDM equipment it does not need and getting less bandwidth and reliability than if it had access to the dry copper or dark fiber needed to provide native Ethernet. AT&T, on the other hand, can use the copper already deployed to the cell sites, with the lower-cost native Ethernet equipment and provision service ubiquitously across its ILEC territory.

As the Commission has recognized, cost alone is only half the equation relative to what can be provisioned economically. *See e.g., TRRO* ¶ 134. The other side of the equation is the revenue a carrier can obtain in the marketplace for the relative level of bandwidth (e.g. a 5 Mbps or 10 Mbps Ethernet circuit). The "price per megabit," however, for Ethernet is not linear when compared to TDM.[21] Said another way, although carriers can provision 9 Mbps of Ethernet using 7 TDM DS1s, the market price for such a service is not 7 times the price of a single DS1.[22] The nature of both the price compression and technology compression in the market means carriers have to provide more Ethernet capacity at a much lower "price per megabit" than for similar TDM capacity. This principle is best illustrated by the example of a CLEC providing Ethernet at a location where it lacks alternatives to RBOC special access services, such as a wireless carrier cell site.

By way of example, Alpheus sells a DS1 for ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** thus two DS1s (or almost 3 Mbps of DS1 capacity) sells for twice that, or ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****. The price per megabit of such TDM circuits is thus, ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** per megabit. With the move to Ethernet, those per megabit economics can not be sustained. A wireless carrier may request a 10 Mbps Ethernet circuit, but they will not pay 10 times the price of the TDM price per megabit. The market, instead, is indicating that a 5 Mbps Ethernet circuit should sell in the range of ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** and a 10 Mbps circuit in the range of ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****. Analyzing the 10 Mbps data, the price per megabit for Ethernet would be ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** per megabit — a full ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** less than

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[21] *Id.* ¶ 22

[22] *Id.*

the TDM price per megabit.[23] More importantly, however, the revenues obtained at this price per megabit are substantially less than the cost to provide it using TDM special access circuits. Thus, the increased costs of using TDM special access to provision Ethernet quickly price the carrier out of the market, making it unable to offer competition in the local Ethernet market at locations where they lack alternatives to RBOC special access services.

Mr. Maella's and Mr. Major's declaration also contradicts AT&T's erroneous contention in Mr. Casto's declaration that "providing the Ethernet electronics can enable providers to exercise greater control over the traffic carried on those circuits."[24] CLECs providing Ethernet over TDM based circuits lack the ability to monitor Ethernet circuits that ride on RBOC TDM special access, because the CLEC lacks any ability to monitor the underlying TDM transmission that is provided over the RBOC's facilities.[25] In contrast, when CLECs are able to access dry copper or dark fiber, they can attach their own electronics and fully integrate those facilities into their network, including the necessary monitoring and operative control required by sophisticated enterprise customers. The Commission has recognized the limitations of using lit services, finding that "competing carriers using unbundled dark fiber transport can operate more efficiently than when using lit transport, because the competing carrier itself engineers and controls the network capabilities of transmission." *TRRO*, ¶ 135; *see also TRO* ¶ 383 (finding that competing carriers "can offer a higher level of service because unbundled dark fiber integrates more efficiently into their networks by reducing the number of failure points and by providing them greater control including the ability to test for quality and maintenance.")

In short, at the many locations where competitors such as Alpheus are limited to AT&T TDM special access services in order to provide Ethernet services, Alpheus and other CLECs face substantial costs to provide Ethernet services that they would not face if they had reasonably priced access to AT&T Ethernet loops. Such loops remain critical bottleneck facilities for the provision of Ethernet, despite the technological capability to provide Ethernet over TDM special access DS1 and DS3 circuits.

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[23] *Id.* ¶ 23.

[24] *ACS Anchorage Forbearance Order*, ¶ 102 citing AT&T Reply Declaration of Parley C. Casto, attached to AT&T, Inc and BellSouth Corp. Opposition to Petitions to Deny and Reply to Comments, WC Dkt. No. 06-74, ¶ 22 (filed June 20, 2006).

[25] Maella/Major Decl. ¶ 24.

II. DESPITE THE TRO'S IMPAIRMENT ANALYSIS FOR OCN TRANSMISSION FACILITIES, THE DOMINANT CARRIER STANDARD EVALUATES MARKET POWER, AND AT&T CONTINUES TO EXERCISE MARKET POWER IN THE OCN MARKET

AT&T continues to press its position that the Commission's impairment determinations in the *TRO and TRRO* require that the Commission grant AT&T forbearance from dominant carrier regulation of its OCn level special access services. This argument is neither consistent with the *TRO* nor with the facts in the marketplace.

The critical question at issue in this proceeding is whether the RBOC petitioner has market power over the services at issue by virtue of their control over bottleneck last mile transmission facilities.[26] As the Commission explained in the TRO, its impairment determinations have no bearing on whether the incumbent retains market power. *See TRO* ¶ 109-110. In fact the Commission anticipated the very scenario under consideration here, holding that "there may be circumstances where an incumbent LEC has market power with regard to a particular input, but competitors are not impaired without access to the element." *TRO* ¶ 110. That is precisely the case with respect to OCn facilities; market power is different from carrier impairment. AT&T clearly retains market power and thus is not entitled to the forbearance sought.

The RBOCs also overlook an important component of the Commission's OCn impairment analysis in the *TRO*, namely that carriers needing OCn level transmission facilities "will also have the ability to purchase dark fiber, including unbundled dark fiber loops, and attach their own optronics to activate such loops." *TRO* ¶ 318. Indeed, Alpheus regularly utilized such unbundled dark fiber. Because UNE dark fiber loops are no longer available, carriers needing OCn loop facilities, but without the means to deploy such facilities economically, inevitably must obtain those facilities from the ILEC pursuant to its special access tariffs or risk losing those customers.

At a minimum, the Commission cannot simply rely on its OCn impairment determinations to grant forbearance but would have to develop a record complete with evidence showing where competitors had deployed OCn level transmission facilities to such an extent that the RBOC no longer had market power for the sale of OCn services. Instead, the ILECs would simply have this Commission equate lack of impairment with lack of market power, a radical step that the Commission has never embraced.

Of course, it is the RBOCs' burden to supply that analysis, which they have failed to do, instead clinging to claims of a "national market" for any service to which it can affix the magic label of "broadband." The reality in the marketplace, however, is that

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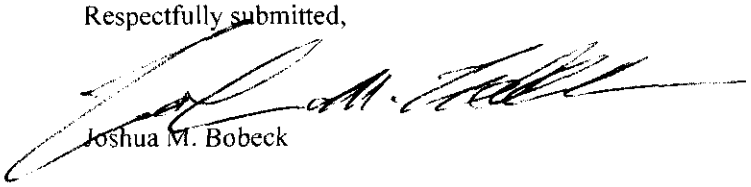
[26] *See e.g. ACS Anchorage Order*, ¶ 111-112.

competitors are not currently deploying, and are unable to deploy OCn level facilities to anywhere near the number of locations where demand for those services exists.[27]

While Alpheus always prefers to deploy its own facilities where possible, the record reflects the limited presence CLECs have at enterprise market buildings nationwide.[28] Alpheus' experience in Texas is consistent with the data provided by TWTC, Covad, NuVox and XO, as it can neither deploy its own fiber loops to most of its customers nor can it deploy fiber loops to the vast majority of commercial buildings in its markets.[29] This means that for both its existing customers and to meet new demand, Alpheus will continue to be reliant on AT&T— the dominant provider of last mile fiber connectivity in its markets.

Respectfully submitted,



Joshua M. Bobeck

Counsel for Alpheus Communications, L.P.

Enc.

cc: Ian Dillner
Scott Deutchman
Scott Bergmann
Christopher Moore
John Hunter
Donald Stockdale
William Dever
Dana Shaffer

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[27] It should also be noted that the Commission's impairment determinations did not suggest that deployment would always be economic at every location where CLECs sought to meet demand for such facilities.

[28] *See* TWTC Taylor Reply Decl. ¶ 4 (reaching 26.8% of its customer buildings with its owns facilities); Letter from Brad E. Mutschelknaus, Counsel for Covad Communications Group, Nuvox Communications and XO Communications, LLC, to Marlene Dortch, FCC, WC Dkt. No. 06-125, WC Dkt. No. 06-172, WC Dkt. No. 07-97, WC Dkt. No. 04-440 at pp. 3-4 (Oct. 1, 2007) (presenting data showing how CLECs had deployed fiber to small fraction of commercial buildings in major MSAs and that even in the wire centers with the largest concentration of CLEC deployed fiber, CLEC deployments still only reached a small fraction of the commercial buildings in those wire centers.)

[29] Maella/Major Decl. ¶¶ 10-11.

REDACTED-FOR PUBLIC INSPECTION

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to its Broadband Services	)	
	)	
Qwest Petition for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Broadband Services	)	WC Docket No. 06-125
	)	
Petition of BellSouth Corporation for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to its Broadband Services	)	

ALPHEUS COMMUNICATIONS, L.P.
JOINT DECLARATION OF
KENT MAJOR AND FRANCISCO MAELLA

We, Kent Major and Francisco Maella, pursuant to 28 U.S.C. § 1746, declare as follows:

1. We each are over 21 years of age and competent to give this Declaration. We both know the information set forth in this Declaration to be correct as a matter of our personal knowledge and as a result of our positions with Alpheus Communications, L.P. ("Alpheus").

2. I, Kent Major, President of Alpheus, oversee commercial and evaluation and pricing issues for Alpheus. I lead the Company's Commercial Management division and am responsible for business development, pricing, strategy and asset management. I served

previously as Director of Business Development and Strategic Investments for Compaq Computer Corporation prior to joining Alpheus and its predecessor. I also spent eight years at SBC Communications, most recently as Director of Sales & Implementation, where I was responsible for maintaining and growing a $2.3 billion revenue stream from SBC's largest customer. Additionally, I was a Director of Sales & Implementation in SBC's Select Accounts organization, and served as Director of Wholesale Marketing, responsible for leading the regulatory and operational efforts to open SBC's local markets to competition in the areas of Operational Support Systems (OSS) and Ancillary Services.

3. I, Francisco Maella, Chief Operating Officer for Alpheus have the primary responsibility within Alpheus to manage the network engineering, planning, provisioning and operations functions for Alpheus. Prior to joining Alpheus, I managed the Network Architecture and Design at Valiant Networks, Inc. where I was responsible for architecture, supplier selection and design of optical, data and voice networks for carrier customers and, prior to that, I was employed by Williams Communications Group as Senior Staff Manager and Chief Technologist of Data Technologies where I was responsible for the design, supplier selection, and deployment of ATM, Frame Relay and IP technologies. Prior to Williams, I was employed by MCI WorldCom where I held engineering positions with responsibilities that included the deployment of voice, data, and transport technologies.

4. We make this declaration in support of Alpheus' comments in WC Docket No. 06-125. In this declaration we describe (1) the economics competitors such as Alpheus face in providing Ethernet services using TDM special access services purchased from Re-

gional Bell Companies such as AT&T, (2) the ability to efficiently deploy fiber for OCN level services and (3) Alpheus' level of deployment of fiber loops to enterprise buildings in our markets.

5. As we will explain in detail below, Alpheus' ability to compete with AT&T in the telecommunications market will be dramatically weakened if the FCC does not continue to require AT&T to provide tariffed access to AT&T's Ethernet services. This is particularly important where competitors are unable to economically deploy their own fiber transmission facilities, purchase alternative fiber facilities from another competitor or obtain access to AT&T copper loop facilities.

I. ALPHEUS' NETWORK

6. Alpheus is a facilities-based CLEC operating in Texas. Alpheus is primarily a wholesale provider of telecommunications transport services to other carriers, and also serves small, medium and large business customers. (We use "transport" here in the generic sense, meaning the transmission of telecommunications signals from point to point; not in the technical sense used in past Commission orders). In other words, Alpheus' state-of-the-art fiber optic network provides and manages data pipes or pathways while providing the intelligence that allows its customers to transmit substantial amounts of data at very high speeds. Alpheus has invested close to $400 million in facilities and infrastructure to give competitive carriers in Texas an alternative to AT&T's special access service. These investments includes substantial fixed costs in order to deliver robust and efficient services to its customers —namely in deployment of fiber optic transmission facilities, innovative equipment to light fiber facilities, grooming and muliplexing gear, as well as

investments in state of the art network operations and back office systems for seamless delivery and provisioning of services.

7. Alpheus has deployed the latest technology using next generation Synchronous Optical Networking ("SONET"), dense wave division multiplexing ("DWDM") and Ethernet equipment to serve Dallas, Fort Worth, Austin, Houston, San Antonio and Corpus Christi, the largest market areas in Texas. By deploying state-of-the-art technology in its network, Alpheus brings an innovative, ubiquitous and highly reliable transport service to the wholesale telecommunications market in Texas, which in turn, promotes competition in the retail market.

8. Alpheus deploys its SONET, DWDM, Ethernet and other optronic equipment at its core network sites called hubs, located in each market area on its Texas network. In order to reach its customers, who are dispersed throughout each metropolitan area, Alpheus has collocated its own telecommunications transmission equipment in AT&T's central offices. Alpheus' hubs are typically connected to these collocation arrangements with Alpheus owned fiber entrance facilities. Currently, Alpheus has collocation arrangements in approximately 120 AT&T central offices in Austin, Dallas, Fort Worth, Houston, Corpus Christi and San Antonio. Alpheus then typically connects each of these collocation arrangements using fiber-optic facilities that it has deployed or obtained from third parties.

9. It is always in Alpheus' interest to deploy its own fiber facilities whenever possible. By deploying its own facilities, Alpheus can control the service and provide the service level guarantees enterprise and carrier customers demand. Deploying its own facilities also permits Alpheus to provide new innovative services, such as Ethernet, that are not shackled by the network design or the technology of the incumbent LEC.

10. Because of the considerable barriers to deployment and the sunk costs involved in deploying fiber facilities it is not possible for Alpheus to deploy to every customer location where there is demand for fiber-based services. Investing the considerable fixed sums into fiber facilities requires sufficient revenue guaranteed over a certain amount of time in order to justify the deployment of fiber. Where Alpheus economically can not justify deployment of its own fiber loops, we must rely on the incumbent LEC, (AT&T in our markets), to supply those loops. This is because, at the vast majority of commercial buildings to which Alpheus can not deploy its own fiber loops, AT&T has already deployed its own fiber and maintains the only fiber presence at that building. Because OCn loops are not available as unbundled network elements and DS3 UNE loop access is severely limited under the FCC's rules, Alpheus buys a significant percentage of its DS3 and above capacity from a pricing flexibility arrangement entered into under AT&T's FCC special access tariffs.

11. Out of all of the locations where Alpheus currently provides fiber-based services (i.e. DS3 and OCn level services), Alpheus serves only approximately ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** of these locations with its own fiber last mile facilities, but is forced to rely on AT&T for the rest, as well as for the thousands of DS1 loops it uses to serve its customers. Further, Alpheus' on-net buildings constitute much less than ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** of the commercial buildings in its markets.

II. ALPHEUS' ETHERNET TELECOMMUNICATIONS SERVICES

12. Alpheus' business model is predicated on the philosophy that telecommunications competition at the retail level cannot flourish until retail telecommunications providers have more than one source of supply for the inputs needed to provide their services. In

addition to providing wholesale telecommunications services that are standard and similar to those generally available from AT&T, such as DS1 and DS3 transport,[1] Alpheus goes further and has deployed more innovative and more widely available services, such as managed wavelength services capable of supporting transparent OC48, Gigabit Ethernet connectivity and rate limited Gigabit Ethernet connections.

13. Alpheus was an early entrant into the carrier Ethernet market in its Texas footprint and continues to expand the availability of its Ethernet services. Alpheus provides its Ethernet customers with redundant MPLS routing over a self-healing DWDM fiber backbone, and provides scalable services from 1 Mbps to 10 Gbps, with flexible interfaces including 10/100Mbps FastE, 1000 Mbps GigE and 10 Gbps Ethernet. Alpheus' Ethernet services allow retail customers to connect their local area networks together more efficiently but also allow carriers to offer Ethernet services to their retail customers. However, Alpheus can only provide Ethernet where it has fiber available or has ready access to reasonably priced last mile facilities from AT&T. At many locations, particularly wireless carrier cell sites, the only last mile facility available is a special access circuit from AT&T.

14. Ethernet is becoming a more significant service for both Alpheus' core wholesale customers as well as retail enterprise customers, particularly in the small to medium business market. The technological underpinnings of Ethernet service are explained ade-

[1] DS1, DS3 and OC12 are measures of the information transmission capacity of a telecommunications circuit. DS3 refers to the capacity to transmit 44.736 Mbps of information. A DS3 is the equivalent of 28 DS1s. Each DS1 equals 1.544 Mbps of capacity and is the equivalent of 24 DS0s at 64 kbps of capacity. A DS0 represents the capacity of typical voice grade circuit over copper telephone wires used to provide plain old telephone service to most Americans. An OC12 is the equivalent of 12 DS3s and an OC48 is the equivalent of 48 DS3s. At a level of DS3 and above, transmission must typically be provided over fiber.

quately in Time Warner Telecom's Declaration of Graham Taylor, filed in WC Docket 06-74 on June 5, 2006, ¶¶ 8-11.

15. There has been increasing demand from enterprise customers for "mid-band" Ethernet services. As small and medium sized businesses see their data networking needs increase or as large businesses foresee need for more bandwidth at satellite offices, these businesses are outgrowing the one or two DS1s of bandwidth they currently require. These businesses, however can neither afford, nor need the next TDM increment of a 45 Mbps DS3. Instead, they are increasingly requesting solutions between 5-20 Mbps, with an Ethernet handoff. Wireless carrier cell site backhaul is a perfect example of this burgeoning demand for "mid-band" Ethernet. Our wireless carrier customers are increasingly indicating that they will soon require 5-10 Mbps of Ethernet capacity to replace the one or two DS1s they currently require to connect their cell sites to their mobile switching centers as users of cell phones increase the use of the device to connect to the internet, text, email, download songs and even watch video.

16. On paper, carriers can theoretically use TDM special access services such as DS1s to provide Ethernet services. Ethernet over TDM, however, is limited by the capacity of the underlying TDM transmission path. In other words, using a DS1 limits a carrier to an Ethernet transmission path of approximately 1.445Mbps. Through a process called "bonding," carriers can combine multiple TDM DS1 facilities to support more Ethernet bandwidth. For instance, using two DS1 circuits for an Ethernet transmission allows a carrier access to approximately 3 Mbps of Ethernet capacity and so on in a logical progression. Similarly, using a DS3 limits the CLEC to an approximately 45Mbps path. However, some of the TDM capacity is lost because it is needed for the conversion be-

tween the TDM and Ethernet transmission protocols, so two DS3s does not result in precisely 90 Mbps of Ethernet nor does two DS1s equal precisely 3 Mbps of capacity for Ethernet. Typically the bandwidth loss is in the range of 10% depending on the carrier's equipment.

17. Thus to provide a 5 Mbps Ethernet service a carrier would need to bond at least 4 DS1s. For a 10 Mbps Ethernet service a CLEC would need to use 8 DS1s. In contrast, a dry copper loop, with all accreted devices and bridged tap removed, can provide approximately 5 Mbps per twisted pair. Competitors are limited to using special access services to cell sites (and not UNEs), even though copper facilities exist today to cell sites. Dry copper facilities are not offered under special access tariffs and are therefore unavailable to wholesale carriers like Alpheus.

18. In providing Ethernet service over its own fiber facilities or over dry copper Alpheus must invest in and provision Ethernet equipment. However, in providing Ethernet service using bonded TDM DS1 special access services, the equipment costs for Ethernet over TDM special access are far more expensive than the equipment costs Alpheus uses to provide Ethernet using dark fiber or dry copper. Alpheus must invest in DS1 to Ethernet aggregation equipment in order to provide Ethernet over TDM special access. Alpheus would neither purchase nor deploy this equipment to provide native Ethernet (i.e. using its own fiber or dry copper). In addition, Alpheus and other CLECs providing Ethernet over TDM special access must use its TDM network equipment to transmit the TDM circuit from the ILEC point of termination (Alpheus' collocation arrangement). Not

surprisingly, the extra costs for this duplicative equipment are almost exactly two times the cost of the equipment used for Ethernet alone. Alpheus must, of course, directly factor this cost differential into its pricing to its customer.

19. CLECs using TDM special access services to provide "mid-band" Ethernet services — such as 5-10 Mbps level services also face additional costs because they need to bond multiple DS1 special access circuits together to provide the same level of capacity the BOC can provide using its much more cost efficient and ubiquitously deployed fiber and/or dry copper transmission facilities. The cost of using multiple TDM special access circuits to provide "mid-band" Ethernet can quickly exceed the revenues available from providing those services to customers.

20. Providing 5 Mbps and 10 Mbps Ethernet services over bonded DS1s would cost Alpheus approximately ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****. That cost includes the ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** Alpheus pays for DS1 channel terminations under its pricing flexibility arrangement under AT&T's FCC Tariff No. 73. In order to bond the special access DS1s necessary to sell a 5 Mbps or 10 Mbps Ethernet service Alpheus must pay ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** for the channel terminations before the cost of Ethernet equipment is included. And Alpheus, unlike other competitors that do not have extensive central office collocations, only has to purchase the last mile channel terminations; other carriers' cost would be much greater since they have to buy mileage also. Based on a conservative 18 month return on investment, the equipment necessary to provide Ethernet over TDM special access is ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****.

21. Further, and as TWTC explained, providing Ethernet using TDM special access services requires CLECs to pay twice for the electronics — once for its Ethernet and TDM gear and once for the RBOCs multiplexers that generate the DS1 (or DS3) TDM transmission path.[2] Reliance on TDM loops also introduces additional points of failure, complicating network operations and service issues.[3]

22. As the Commission has recognized, cost alone is only half the equation relative to what can be provisioned economically.[4] The other side of the equation is the revenue a carrier can obtain in the marketplace for the relative level of bandwidth (e.g. a 5 Mbps or 10 Mbps Ethernet circuit). The "price per megabit," however, for Ethernet is not linear when compared to TDM. Said another way, although carriers can provision 9 Mbps of Ethernet using 7 TDM DS1s, the market price for such a service is not 7 times the price of a single DS1. The nature of both the price compression and technology compression in the market means carriers have to provide more Ethernet capacity at a much lower "price per megabit" than for similar TDM capacity. This principle is best illustrated by the example of a CLEC providing Ethernet at a location where it is limited to special access TDM services.

23. By way of example, Alpheus sells a DS1 at a flat rate (Alpheus does not charge mileage for transport) for ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****, thus two DS1s (or approximately 3 Mbps of DS1 capacity) sells for twice that, or ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL****. The price per megabit of such

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[2] TWTC Taylor Decl., ¶¶ 26, 43; Letter from Thomas Jones, Counsel, Time Warner Telecom, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 06-74, Attach. Reply Decl. of Graham Taylor ¶ 18, August 8, 2006 ("TWTC Taylor Reply Decl."). TWTC Taylor Reply Decl., WC Dkt No. 06-74 ¶ 18.

[3] TWTC Taylor Reply Decl. ¶ 24.

[4] *TRRO*, ¶¶ 24, 43, 45.

TDM circuits is thus, ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** per megabit. With the move to Ethernet, those per megabit economics can not be sustained. A wireless carrier may request a 10 Mbps Ethernet circuit, but they will not pay 10 times the price of the TDM price per megabit. Alpheus regularly competes in the Ethernet market with other competitive providers who sell Ethernet services at prices in the range of ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** for a 5 Mbps Ethernet service and ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** for a 10 Mbps Ethernet service. Using the 10 Mbps market price, the price per megabit for Ethernet would be between ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** per megabit — a full ****BEGIN CONFIDENTIAL -- END CONFIDENTIAL**** less than the TDM price per megabit and substantially less than the cost incurred to provide such circuit using TDM special access circuits. Thus, the increased costs of using TDM special access to provision Ethernet quickly price the carrier out of the market, making it unable to offer competition in the local Ethernet market at locations where they are limited to special access TDM services.

24. Further, being forced to provide Ethernet over TDM also causes the carrier to lose important control over the circuit. AT&T's contention in Mr. Casto's declaration that

"providing the Ethernet electronics can enable providers to exercise greater control over the traffic carried on those circuits"[5] is simply incorrect. CLECs providing Ethernet over TDM based circuits lack the ability to monitor Ethernet circuits that ride on RBOC TDM special access. This is because the CLEC lacks any ability to monitor the underlying TDM transmission that is provided over the RBOC's facilities. In contrast, when CLECs are able to access dry copper or dark fiber, they can attach their own electronics and fully integrate those facilities into their network, including the necessary control and operative control required by sophisticated enterprise customers.

OCn Capacity Services

25. AT&T and the other BOCs assert that competitors no longer need tariffed access to OCn special access services because the FCC in 2003 found that competitors could deploy their own OCn facilities. The market reality for Alpheus, however, is that as discussed above in ¶¶ 9-11, for the vast majority of enterprise locations where Alpheus provides DS3 and above services to its customers it is not able to deploy its own fiber transmission facilities.

26. Declarants sayeth no more.

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[5] AT&T Reply Declaration of Parley C. Casto, attached to AT&T, Inc and BellSouth Corp. Opposition to Petitions to Deny and Reply to Comments, WC Dkt. No. 06-74, ¶¶ 21-22 (filed June 20, 2006).

We declare under penalty of perjury that the foregoing is true and correct.

Kent Major
Alpheus Communications, L.P.

Francisco Maella
Alpheus Communications, L.P.

Executed on: October 5, 2007
Houston, Texas